



213721\_Seq\_ST25  
SEQUENCE LISTING

<110> Feussner et al.

<120> Linoleate- and Linolenate-Lipoxygenase-Mutants

<130> 213721

<141> US 09/937,908

<140> 2002-01-07

<150> PCT/EP00/02545

<151> 2000-03-22

<150> DE 19914464.8

<151> 1999-03-30

<160> 3

<170> PatentIn Ver. 2.1

<210> 1

<211> 878

<212> PRT

<213> Cucumis sativus

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Arg Val Ser Ser Leu Gly Gly Asn Lys Ile Lys Gly Lys Val Ile Leu  
35 40 45

Met Arg Ser Asn Val Leu Asp Phe Thr Glu Phe His Ser Asn Leu Leu  
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Asp Asn Phe Thr Glu Leu Leu Gly Gly Gly Val Ser Phe Gln Leu Ile  
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Ser Ala Thr His Thr Ser Asn Asp Ser Arg Gly Lys Val Gly Asn Lys  
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Ala Tyr Leu Glu Arg Trp Leu Thr Ser Ile Pro Pro Leu Phe Ala Gly  
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Glu Ser Val Phe Gln Ile Asn Phe Gln Trp Asp Glu Asn Phe Gly Phe  
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Pro Gly Ala Phe Phe Ile Lys Asn Gly His Thr Ser Glu Phe Phe Leu  
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Lys Ser Leu Thr Leu Asp Asp Val Pro Gly Tyr Gly Arg Val His Phe  
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Asp Cys Asn Ser Trp Val Tyr Pro Ser Gly Arg Tyr Lys Lys Asp Arg  
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Ile Phe Phe Ala Asn His Val Tyr Leu Pro Ser Gln Thr Pro Asn Pro  
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## 213721\_Seq\_ST25

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 Thr Gly Glu Arg Lys Glu Trp Asp Arg Ile Tyr Asp Tyr Asp Val Tyr  
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 Asn Asp Ile Ala Asp Pro Asp Val Gly Asp His Arg Pro Ile Leu Gly  
 225 230 235 240  
 Gly Thr Thr Glu Tyr Pro Tyr Pro Arg Arg Gly Arg Thr Gly Arg Pro  
 245 250 255  
 Arg Ser Arg Arg Asp His Asn Tyr Glu Ser Arg Leu Ser Pro Ile Met  
 260 265 270  
 Ser Leu Asp Ile Tyr Val Pro Lys Asp Glu Asn Phe Gly His Leu Lys  
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 Lys Pro Gly Leu Gln Ser Ile Phe Asp Val Thr Pro Asn Glu Phe Asp  
 305 310 315 320  
 Asn Phe Lys Glu Val Asp Asn Leu Phe Glu Arg Gly Phe Pro Ile Pro  
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 Phe Asn Ala Phe Lys Thr Leu Thr Glu Asp Leu Thr Pro Pro Leu Phe  
 340 345 350  
 Lys Ala Leu Val Arg Asn Asp Gly Glu Lys Phe Leu Lys Phe Pro Thr  
 355 360 365  
 Pro Glu Val Val Lys Asp Asn Lys Ile Gly Trp Ser Thr Asp Glu Glu  
 370 375 380  
 Phe Ala Arg Glu Met Leu Ala Gly Pro Asn Pro Leu Leu Ile Arg Arg  
 385 390 395 400  
 Leu Glu Ala Phe Pro Pro Thr Ser Lys Leu Asp Pro Asn Val Tyr Gly  
 405 410 415  
 Asn Gln Asn Ser Thr Ile Thr Glu Glu His Ile Lys His Gly Leu Asp  
 420 425 430  
 Gly Leu Thr Val Asp Glu Ala Met Lys Gln Asn Arg Leu Tyr Ile Val  
 435 440 445  
 Asp Phe His Asp Ala Leu Met Pro Tyr Leu Thr Arg Met Asn Ala Thr  
 450 455 460  
 Ser Thr Lys Thr Tyr Ala Thr Arg Thr Leu Leu Leu Leu Lys Asp Asp  
 465 470 475 480  
 Gly Thr Leu Lys Pro Leu Val Ile Glu Leu Ala Leu Pro His Pro Gln  
 485 490 495  
 Gly Asp Gln Leu Gly Ala Ile Ser Lys Leu Tyr Phe Pro Ala Glu Asn  
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 Gly Val Gln Lys Ser Ile Trp Gln Leu Ala Lys Ala Tyr Val Thr Val  
 515 520 525

## 213721\_Seq\_ST25

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 Ala Val Leu Glu Pro Phe Val Ile Ala Thr His Arg Gln Leu Ser Val  
 545 550 555 560  
 Leu His Pro Ile His Lys Leu Leu Val Pro His Tyr Lys Asp Thr Met  
 565 570 575  
 Phe Ile Asn Ala Ser Ala Arg Gln Val Leu Ile Asn Ala Asn Gly Leu  
 580 585 590  
 Ile Glu Thr Thr His Tyr Pro Ser Lys Tyr Ser Met Glu Leu Ser Ser  
 595 600 605  
 Ile Leu Tyr Lys Asp Trp Thr Phe Pro Asp Gln Ala Leu Pro Asn Asn  
 610 615 620  
 Leu Met Lys Arg Gly Leu Ala Val Glu Asp Ser Ser Ala Pro His Gly  
 625 630 635 640  
 Leu Arg Leu Leu Ile Asn Asp Tyr Pro Phe Ala Val Asp Gly Leu Asp  
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 Tyr Lys Asp Asp Asn Ala Val Gln Asn Asp Phe Glu Leu Gln Ser Trp  
 675 680 685  
 Trp Asn Glu Leu Arg Glu Lys Gly His Ala Asp Lys Lys His Glu Pro  
 690 695 700  
 Trp Trp Pro Lys Met Gln Thr Leu Ser Glu Leu Ile Glu Ser Cys Thr  
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 Thr Ile Ile Trp Ile Ala Ser Ala Leu His Ala Ala Val Asn Phe Gly  
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 Gln Tyr Pro Tyr Gly Gly Tyr Ile Leu Asn Arg Pro Thr Thr Ser Arg  
 740 745 750  
 Arg Phe Met Pro Glu Val Gly Thr Ala Glu Tyr Lys Glu Leu Glu Ser  
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 Asn Pro Glu Lys Ala Phe Leu Arg Thr Ile Cys Ser Glu Leu Gln Ala  
 770 775 780  
 Leu Val Ser Ile Ser Ile Ile Glu Ile Leu Ser Lys His Ala Ser Asp  
 785 790 795 800  
 Glu Val Tyr Leu Gly Gln Arg Ala Ser Ile Asp Trp Thr Ser Asp Lys  
 805 810 815  
 Ile Ala Leu Glu Ala Phe Glu Lys Phe Gly Lys Asn Leu Phe Glu Val  
 820 825 830  
 Glu Asn Arg Ile Met Glu Arg Asn Lys Glu Val Asn Leu Lys Asn Arg  
 835 840 845  
 Ser Gly Pro Val Asn Leu Pro Tyr Thr Leu Leu Val Pro Ser Ser Asn  
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